



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

### Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

### About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

LD  
3751

B 488125 L

*Nevada State Univ*

ANNUAL REPORT

OF THE

BOARD OF REGENTS

OF THE

STATE UNIVERSITY,

FOR THE

YEAR ENDING DEC. 31, 1892.



CARSON CITY, NEVADA.

STATE PRINTING OFFICE. : : : JOSEPH E. ECKLEY, SUP T  
1893.





ANNUAL REPORT

— OF THE —

Board of Regents of the State University.

---

FOR YEAR ENDING DEC. 31, 1892.

## BOARD OF REGENTS.

---

HIS EXCELLENCY R. K. COLCORD ( <i>ex-officio</i> )	-----	Carson
ATTORNEY-GENERAL JAMES D. TORREYSON ( <i>ex-officio</i> )	-----	Carson
HON. HENRY L. FISH ( <i>re-elected</i> )	-----	Reno
HON. EDWARD T. GEORGE ( <i>short term</i> )	-----	Lewis
HON. JAMES W. HAINES ( <i>holdover</i> )	-----	Genoa

---

### OFFICERS.

---

HON. HENRY L. FISH	-----	President
GEORGE H. TAYLOR, Reno	-----	Secretary

## FACULTY.

---

STEPHEN A. JONES, M. A., Ph. D., PRESIDENT,  
Professor of the Latin Language and Literature.

HANNAH K. CLAPP, M. A.,  
Preceptress and Librarian.

WALTER McN. MILLER, B. Sc.,  
Professor of Anatomy, Physiology and Geology.

ROBERT D. JACKSON, Ph. B.,  
Professor of Mining and Metallurgy.

J. WARNE PHILLIPS, D. Sc.,  
Professor of Physics and Chemistry.

FRED. H. HILLMAN, M. S.,  
Professor of Entomology and Botany.

MRS. MARY W. EMERY,  
Professor of Pedagogics and Principal of the State Normal School.

ROBERT LEWERS,  
Professor of Economic Science and Principal of the Commercial  
Department.

FIRST LIEUT. JOHN M. NEALL, Fourth U. S. Cavalry,  
Professor of Military Science and Tactics, Mathematics and French.

RANSOM H. McDOWELL, B. Sc.,  
Professor of Agriculture and Horticulture.

NATHANIEL E. WILSON, B. Sc.,  
Chemist of the Experiment Station.

THOMAS W. COWGILL, M. A.,  
Professor of English and History.

RICHARD BROWN,  
Superintendent of the Mechanical Department.

HENRY THURTELL, B. Sc.,  
Professor of Mechanics and Mechanical Drawing.

JAMES E. CHURCH, JR., B. A.,  
Instructor in Latin and German.

FREDERICK STADTMULLER, B. S.,  
Assistant in Physics and Chemistry.

ESTELLA B. EDE,  
Assistant in Training School.

WALTER McN. MILLER,  
Curator of Museum.

ROBERT LEWERS,  
Registrar and Secretary of the Faculty.

# REPORT.

---

RENO, Nevada, Dec. 10, 1892.

*To His Excellency, R. K. Colcord, Governor of Nevada :*

SIR : I have the honor to submit herewith the annual report of the Board of Regents of the Nevada State University for the year ending December, 1892.

Respectfully yours,

GEO. H. TAYLOR,

Secretary.



# ANNUAL REPORT.

---

OFFICE OF THE BOARD OF REGENTS, STATE UNIVERSITY, }  
RENO, Nevada, Dec. 7, 1892. }

*To His Excellency, R. K. Colcord, Governor of Nevada :*

SIR: In accordance with an "Act relating to the State University and matters properly connected therewith," approved February 7, 1887, we submit herewith: A financial report of the Secretary; a report of the President of the University, including a roster of the students for the term; also reports in detail of the several departments of the institution. During the present year several important improvements and changes have been made, including a two story frame addition 60x20 feet on the west side of the Mechanic Arts building, affording largely increased facilities for work on the first floor, and ample room on the second floor for a dormitory for male students. A further addition on the south side of the same building contains a steam boiler and engine for increased power in the respective shops. The third floor of the Mining Laboratory building having been vacated as a dormitory, is now occupied for the grouping, classifying and displaying of the valuable and extensive collection of minerals, ores, rocks, metals and saline deposits, heretofore hid in closets and corners for lack of space.

All departments of the University are working smoothly and harmoniously. The dormitories accommodate all students requiring them, and the dining room is well patronized. With each succeeding term applications for examination multiply, and at present the benefits of the institution are enjoyed by one hundred and sixty bright, healthy students not excelled by any in the land. The young ladies find a pleasant home at the dormitory under the sympathetic care of the Preceptress; the young men find health and vigor in the daily practice of military tactics, while the wearing of the blue and the bearing of the stars and stripes inculcate a love of country and devotion to the flag, unyielding and lasting.

While the University receives liberal appropriations from the United States Government under the "Hatch Act," relative to Experiment Stations, and under the "Morrill Act," relative to Agriculture, Mechanic Arts, and Military Tactics, the application of these

appropriations is circumscribed within certain limits and prohibitory in many respects. The State of Nevada is certainly expected to meet the General Government on common ground, fairly and reasonably in the matter of appropriations. Attention is called to the recommendation of the President of the University in this connection, that the property of the State may be properly cared for and every interest well guarded.

Under the provisions of an Act of the last Legislature relative to the erection of a Mining Laboratory building and the free assaying of ores, the Board caused such building to be erected, and the work of assaying commenced. In consequence of "riding a free horse," the laboratory was soon overloaded with samples of ores for assay, and at the present time is still crowded with work. The assay of ores for the determination of gold and silver being prohibited, and the results to mines and mining not coming to our knowledge, we are unable to judge of the benefits resulting to the State generally. If the work in this line is to be continued, an appropriation by the Legislature must be made for the purpose.

H. L. FISH,  
President of the Board of Regents.

# FINANCIAL REPORT

## OF THE STATE UNIVERSITY OF NEVADA, 1891-2.

State appropriation for the years 1891-2.----- \$20,000 00

*Expenditures for the year 1891:*

Salaries .....	\$5,514 72
Incidentals .....	177 18
Stationery and printing .....	533 33
Traveling expenses .....	301 75
Building and repairs .....	2,319 50
Labor account .....	776 45
Plumbing .....	286 25
Water, fuel and gas .....	983 00
Insurance .....	530 00
Furniture and fixtures .....	866 28
Apparatus and supplies .....	526 84
Freight, drayage and expressage .....	244 18
Farm house .....	750 00

Total expenditures for 1891.----- 13,809 57

*Expenditures for 1892:*

Salaries .....	\$3,297 23
Incidentals .....	181 96
Stationery and printing .....	170 95
Traveling expenses .....	130 50
Building and repairs .....	449 91
Labor account .....	173 20
Plumbing .....	54 95
Chemical supplies .....	62 84
Water, fuel and gas .....	849 60
Furniture and fixtures .....	364 25
Apparatus and supplies .....	168 65
Freight, drayage and expressage .....	93 22
Grounds and improvements .....	187 61

Total expenditures for 1892.----- 6,184 87  
Balance unexpended ----- 5 56

\$20,000 00

RENO, Nevada, Dec. 8, 1892.

I, the undersigned Secretary of the Board of Regents, hereby certify that the foregoing statement of receipts and expenditures for the years 1891 and 1892 is a correct copy of the books of the Board of Regents.

GEO. H. TAYLOR, Secretary.

## Financial Report of the Nevada State Mining Laboratory.

*Receipts:*

State appropriation for the years 1891-92.----- \$8,000 00

*Expenditures 1891:*

Building and equipment .....

\$6,992 98

*Expenditures 1892:*

Salaries .....

741 20

Supplies .....

247 62

Total expenditures ----- 7,881 80  
Balance unexpended ----- 18 20

\$8,000 00

The foregoing is a correct copy of the books of the Board of Regents.

GEO. H. TAYLOR, Secretary.

# PRESIDENT'S REPORT.

OFFICE OF PRESIDENT OF THE STATE UNIVERSITY. }  
RENO, Nevada, Dec. 1, 1892. }

*To the Board of Regents of the Nevada State University:*

GENTLEMEN: I have the honor to submit herewith my annual report as required by law.

Very respectfully,  
STEPHEN A. JONES, President.

## PRESIDENT'S REPORT.

The past year has been one of continued growth and prosperity in the history of the institution. One year ago the Faculty consisted of fourteen members; it now numbers seventeen. Mr. James E. Church, Jr., of Michigan University was elected instructor in Latin and such other branches as the best interests of the University may demand. Mr. Church came to us highly recommended by some of the first scholars of the country, and his work here seems to justify the good things said of him. Mr. Frederick Stadtmuller, who graduated as Bachelor of Science in the School of Agriculture at the University last June, was made assistant in physics and chemistry. Work in elocution and grammar was assigned to Mrs. Emery, Principal of the Normal School, and Miss Estella B. Ede, a graduate of the Normal department was made her assistant in the training school work. The work of both of the graduates is satisfactory. The enrollment of students for the fall term has reached the unprecedented number of 160—twenty-eight more than one year ago. There are on file a number of applications for next term. During the fall term twenty-nine students have been boarding and rooming in the dormitory, while a few have taken a part or all of their meals there. It affords students a good home, with excellent board, under the special care and oversight of members of the Faculty. At certain times in the day they are allowed to go into town, but in the evening they are required to be in their rooms and attend to their studies and are, therefore, removed from any objectionable outside influences and associations. Students furnish their own napkins, towels, bed linen and blankets.

At the commencement in June there were graduated the following persons:

School of Liberal Arts: The degree of B. A. was conferred upon Blanche Davis of Carson.

School of Mines: The degree of B. S. was conferred upon Albert Moses Lewers of Franktown.

School of Agriculture: The degree of B. S. was conferred upon William Edward Barney of Brown's Station, and Frederick Stadtmuller of San Francisco, Cal.

#### NORMAL DEPARTMENT.

Estella B. Ede	Huffaker's
Cora May Ede	Sierraville, Cal.
Mary Margaret Mayberry	Reno
Clara Alma Taylor	Reno

#### COMMERCIAL DEPARTMENT.

Florence Abrahams	Reno
Cora Larson	Lovelock's
Clarence Christian Larson	Lovelock's
Ida Sauer	Washoe
George A. Robison	Glendale
Clara Alma Taylor	Reno
Albert Weston Ward	Reno

#### MINING LABORATORY.

The mining laboratory, erected a little more than a year ago, is a substantial brick building fifty feet by thirty-two feet, three stories high. On the first floor are a balance room, a crushing and store room, a large assay furnace room, a leaching room and a class room. The second story contains two chemical laboratories, two balance rooms and the office of the Principal of the building. The third story is used for mineralogical cabinets and museum.

The building is well equipped with the necessary apparatus and supplies. All the laboratories are fairly well equipped and in good working order. A physical laboratory has been established, and \$2,000 worth of the most approved apparatus added to what was on hand before.

The plan suggested in my last report of allowing the young ladies in Normal chemistry the option of taking laboratory work in addition to the book work has been carried out. All of them have embraced the opportunity and good results have followed.

#### AGRICULTURE AND MECHANIC ARTS.

One year ago I urged the development of the University along the lines of Agriculture and Mechanic Arts. The idea met with the hearty approval of the Board and Faculty, and instead of the old

course in agriculture, a course in Agriculture and Mechanic Arts was prepared and adopted. It is the aim to give the student both practical and theoretical "instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their application in the industries of life." Quite a number of students entered upon this course at the beginning of the year. It is believed it will commend itself to young men who wish to acquire a liberal industrial education.

### GERMAN AND FRENCH.

The progress made by the classes in German is very creditable. The number of students studying that language at the present time is thirty-six. They are divided into three classes, viz, Freshmen, Sophomores and Juniors. Owing to the conflict of studies, a few who wished to pursue the study were prevented from doing so. A large number are of German parentage, and frequently understand something of the language when they come to the University and hence make rapid progress. During the last year I have conducted classes in Jungfrau von Orleans, Koerner's Zriny, Maria Stuart, Minna von Barnholm and Goethe's Faust, besides classes in writing German and conversational German.

The instruction in French has been that indicated in the University catalogue in the School of Liberal Arts. Satisfactory progress has been made by the different students in the prescribed textbooks. In addition to the course laid down in the catalogue, the most advanced class took a special course in reading some selected works. The plays of the Cid, the Miser, the Misanthrope, Voltaire's History of Charles XII. of Sweden, and DeMaistre's Journey Around my Room. The number of students has been from twelve to fifteen, the number at present under instruction thirteen.

### MILITARY.

Under the earnest and judicious management of the Professor of Military Science and Tactics this department maintains a high standard of efficiency. The drill and discipline have a beneficial influence on the cadets, which causes them to be more respectful to the Professors and to one another, and inspires them with interest in their conduct and personal appearance. Owing to the increase in the number of cadets a requisition was made on the Government for eighteen stands of arms and accoutrements. It was granted, and they have been received at the University.

### GENERAL ASSEMBLY.

The Faculty and students have met in general assembly on Friday afternoon of each week, when some Professor has lectured or some student has presented a literary exercise. Bishop Leonard of



Salt Lake, Professor Cook of the Michigan Agricultural College, Dr. Patterson of Reno, Mrs. Emily Pitt Stevens of San Francisco, and the Rev. Mr. Stafford of Virginia City, have delivered addresses before the assembly. These meetings have been occasions of profit. It is the intention to make them even more interesting and profitable in the future.

### REPAIRS.

Quite extensive repairs will need to be made on some of the buildings in the way of painting and kalsomining, plastering, etc. Not less than \$3,000 will be needed for this purpose. I would urge the expenditure of \$1,000 a year for the next two years in increasing and improving the library. Twenty-five thousand dollars will be needed for current expenses for the next two years, in addition to the aid received from the Government.

### ROSTER OF STUDENTS FOR FALL TERM.

Florence J. Abel	Paradise
Florence Abrahams	Reno
Mary Allen	Silver City
Sara V. Alt	Glendale
Margaret Armstrong	Reno
Rena Ayer	Reno
Lucy A. Barney	Brown's
Richard W. Bassman	Fredericksburg, Cal.
Anna A. Beck	Reno
Agnes Bell	Reno
Mary F. Bell	Reno
Josephine M. Blum	Reno
Lula Blum	Reno
Adelaide M. Boyd	Reno
Mabelle Bouton	Reno
Maud M. Bradley	Reno
Thomas A. Brandon	Reno
William L. Brandon	Reno
Fred Bristol	Reno
Minnie E. Bunker	Newman, Cal
Grace D. Burner	Reno
Charles F. Byrne	Truckee, Cal.
Charles P. Brown	Brown's
Albert W. Cahlan	Susanville, Cal
Edwin E. Caine	Reno
Philip C. Campbell	Reno
Arthur C. Caughlin	Reno
Edna N. Catlin	Carson
Emma K. Cambridge	Eagleville, Cal
Fred R. Carpenter	Paradise

Jay H. Clemons	Virginia
Julia Clow	Reno
Theodore W. Clark	Lewis
Minnie M. Comins	Ely
Harry O. Comstock	Reno
Albert W. Cunningham	Reno
Daniel W. Dillard	St. Clair
Olive M. Douglas	Glendale
Joseph Durkee	Reno
Samuel C. Durkee	Reno
Irene Duffy	Reno
James S. Egan	Virginia
Clara M. Eldred	Pine Grove
Mary A. Erwin	Virginia
Kate Fitzpatrick	Glendale
Claude R. Ford	Eureka
Annie Foster	Carlin
Winfield J. Flood	Virginia
Albert J. Flood	Virginia
Peter P. Frandsen	Verdi
Hedley K. French	Carson
Fred C. Frey	Reno
Louise Frey	Reno
Robert T. Frazer	Glendale
Frank Germain	Winnemucca
Victor Geery	Wadsworth
Mabel K. Godfroy	Virginia
Mary Griffin	Reno
Mary E. Harrison	Lovelock
Andrew Hanson	Virginia
Ulysses Hanson	Virginia
John M. L. Henry	Truckee
Gertrude Hironymous	Cedarville, Cal.
Theodore R. Hofer	Carson
Lydia Hosking	Virginia
George H. Hjul	Eureka
Mary E. Irwin	Reno
Jennie V. Jameson	Verdi
Edgar N. Jaquish	Cedarville, Cal.
Ethel M. Johnson	Wadsworth
Lillian Kelley	Crescent Mills, Cal.
Rebie Kelley	Reno
Alice G. Kline	Reno
Edmund D. Lachman	Reno
Clovis L. LaGrave	Winnemucca
Florence L. Lamb	Verdi
Clarence C. Larson	Lovelocks

Albert M. Lewers	Franktown
Charles R. Lewers	Franktown
Julia M. Lewis	Reno
Cora E. Light	Spencerville, Cal.
Clara E. Litch	Reno
Stella M. Linscott	Cedarville, Cal.
Fred M. Linscott	Cedarville, Cal.
Catherine Longley	Reno
Elizabeth Longley	Reno
Lydia Z. Lonkey	Verdi
Charles Magill	Reno
Arthur P. Mack	Dayton
Katherine Mapes	Reno
Annie H. Martin	Reno
Mary M. Mayberry	Reno
James K. Mayberry	Reno
Clara Mather	Carson
Kate McCarthy	Carson
Edna McDowell	Paradise
Clara M. McGonagle	Winnemucca
William C. McLaughlin	Reno
Harry H. Miller	Chat
Lena A. Monroe	Reno
Mary McAfee	Dyer
Julia Moriarity	Virginia
Nellie Murphy	Empire
Edythe M. Newlands	Reno
Janet Newlands	Reno
Mary H. Neddenreip	Fredericksburg, Cal.
Fred Nichol	Virginia
Mary E. North	Palisade
William H. North	Palisade
Ralph L. Osburn	Reno
Mae Palmer	Reno
Lucy W. Parker	Wadsworth
Lillie B. Pearce	Unionville
Emmet A. Powers	Cedarville, Cal.
Frank J. Powers	Cedarville, Cal.
Charles P. Richards	Lovelocks
Hattie Ridenour	Reno
Katherine Riegelhuth	Reno
Fredrica Maud Rives	Eureka
Edwin M. Reynolds	Stockton
Stella M. Rhodes	Reno
Kate I. Robb	Reno
Mary A. Robb	Reno
Josephine Robertson	Eureka

Hazel B. Rulison	Reno
Orrin C. Ross	Glendale
Edgar Sadler	Eureka
Minnie O. Sadler	Eureka
William F. Sauer	Washoe City
Walter R. Savage	Sutro
Frank V. Saxton	Carson
Anna H. Schadler	Reno
William H. Segrave	Reno
Alameda Simpson	Reno
Ella L. Smart	Genoa
Robert T. Smith	Reno
Laura Smith	Reno
Lillian Spencer	Reno
Mabel A. Stanaway	Reno
Harry E. Stewart	Reno
Marie E. Steele	Glendale
Ina H. Stiner	Reno
Richard Stoddard	Reno
Hugh S. Swan	Halleck
Fred T. Thompson	Reno
Lola N. Thoms	Reno
William F. Tucker	Sheridan
Fred E. Walts	Reno
Albert W. Ward	Reno
Martin P. Ward	Reno
Grace Viola Ward	Reno
Stella N. Webster	Reno
Otto T. Williams	Genoa
Herbert O. Winfrey	Reno
Lloyd P. Wheeler	Reno
Mildred M. Wheeler	Reno
Ellen N. Wilson	Reno
Henry J. White	Hawthorne
William W. Wright	Brown's
Otilia M. Zecherle	Virginia

### CONCLUSION.

In conclusion I would say that the condition of the University is one of growth and increasing efficiency. Although some students are handicapped by lack of preparation incident to meager advantages before coming here, the student body shows a zeal and an earnestness that is commendable, and on the whole the work is satisfactory.

I would gratefully acknowledge my obligations to the Board and Faculty for their active co-operation in my endeavors to advance the interests of the University. Respectfully submitted,

STEPHEN A. JONES, President.

# LIBRARIAN'S REPORT.

STATE UNIVERSITY, }  
RENO, Nevada, Dec. 1, 1892. }

*President S. A. Jones :*

DEAR SIR: I have the honor to submit the following report of the Nevada State University Library.

The usefulness of the Library has been materially increased during the year by the addition of new books, pamphlets, and maps of ancient countries. Since the last report there have been purchased, with great care, and especially with a view to the growing needs of the University, in the departments of literature and science, 498 volumes. Books received from the Department of the Interior at Washington, D. C., as a depository of public documents, 146 volumes. From the Commissioner of Agriculture, Commissioner of Education, Navy Department, Bureau of Animal Industry, Weather Bureau, Hon. William M. Stewart, Hon. John P. Jones and Hon. J. W. Haines, 124 volumes. The library now contains 3,312 bound books and 2,000 pamphlets. The reading-room affords unusual opportunities for the students to acquaint themselves with current events. Daily and weekly papers, magazines, reviews, and quarterlies upon literature, agriculture, horticulture, science, art, religion, and the trades are open to the inspection of all students daily.

The following is a list of current literature paid for by the University and here arranged in alphabetical order.

Age of Steel,	Library Journal,
Army and Navy Journal,	Mining and Scientific Press,
Atlantic Monthly Magazine,	Nevada State Journal,
Biblia, Archaeology and Oriental	North American Review,
Research,	Overland Monthly,
Breeder's Gazette,	Reno Gazette,
California Illustrated,	Review of Reviews,
Century Magazine,	Rural New Yorker,
Chemical Journal,	Scientific American,
Engineering Magazine,	Scribner's Magazine,
Engineering and Mining Journal,	St. Nicholas,
Harper's Magazine,	The Forum,
Harper's Young People,	The Gymnasium,
Journal of Education,	Werner's Voice Culture.

Our exchanges are also becoming quite a feature of the reading room. They extend over a large area of country and are thankfully welcomed by all. They are as follows:

American Advocate of Peace, Boston, Mass.; American Economist, New York; Baltimore Weekly Sun, Baltimore; Bible Treasury, London; Business and Practical Journal of the Office, New York; California Cultivator and Poultry Keeper, Los Angeles; Carson Daily News, Carson; Christian Register, Boston; Christian Cynosure, Chicago; Churchman, New York; Farmer's Review, Chicago; Friend's Review, Philadelphia; Grange Visitor, Lansing, Michigan; Hoisting, an Exponent of Applied Mechanics, Stamford, Conn.; Herald Company Agricultural and Horticultural Journal, Milwaukee; Industrial American, Madison; International Educator, Salt Lake, Utah; Journal of Education, Madison; Musical Record, Chicago; Penman's Art Journal, New York; Pacific Educational Journal, San Francisco; Photographic Times, Illustrated, New York; Phonographic Magazine, Cincinnati; Rural North West, Portland, Or.; Sabbath Outlook, New York; State Board of Health, Nashville, Tenn.; Vick's Magazine, Rochester.

Gifts for the reading table: World's Columbian Exposition, Chicago, Ill.; The Woman's Tribune, Washington, D. C.

Besides the above there is a large number of exchanges sent to the Agricultural Experiment Station, placed on the reading table for the use of the students.

From the record kept of books taken out of the library by students since the last report, I am happy to note a marked improvement in the class of reading. Fiction 49 per cent., history 12 per cent., biography 12 per cent., travels 12 per cent., science 2 per cent., politics 2 per cent., literature 5 per cent., poetry 3 per cent., moral lessons 1 per cent.

Students are allowed free access to the books on the shelves in the library. This great and somewhat unusual privilege has seldom been abused. It is thought that unrestricted liberty to take down and examine books is an advantage so great to the serious student as to more than counterbalance the risk of injury and loss, as well as the considerable inconvenience occasioned by the carelessness of those who avail themselves of the privilege.

By this arrangement students become familiar with the proper method of using the library for literary work. The library is open from 8 o'clock in the morning until 4 o'clock in the afternoon all days that the University is in session.

H. K. CLAPP, Librarian.



## ANATOMY, PHYSIOLOGY AND GEOLOGY.

*To S. A. Jones, Ph. D., President:*

DEAR SIR: I herewith report upon the work done in the Department of Anatomy, Physiology and Geology within the present calendar year:

WINTER TERM.	
<i>Subjects taught—</i>	<i>Students enrolled.</i>
Human Physiology, Senior Liberal Arts-----	5
Geology, Sophomore Mines-----	6
Psychology, Third Year Normals-----	11
Zoology, First Year Normals-----	22
Anatomy, Special-----	1
Physical Training, Young Ladies-----	40

SPRING TERM.	
Human Physiology, Senior Liberal Arts-----	3
Anatomy, Special-----	3
Psychology, Third Year Normals-----	11
Bacteriology, Senior Agriculture-----	2
Zoology, First Year Normals-----	21

FALL TERM, 1892.	
Biology, Comparative Anatomy, Sophomore, Agriculture and Mechanic Arts-----	4
Anatomy and Physiology, Third Year Normals-----	6
Geology, Senior Liberal Arts and Sophomore Mines-----	9
Geology, Second Year Normals-----	10
Physical Geography, First Year Normals-----	15

It is my pleasure to report good work on the part of the majority of the students of the department. The crying need of the department is room. At present all work except lectures and recitations, is done in the east room of the basement of the Experiment Station building. By reason of its situation the room is illy adapted to much of the work, is unhealthy for its occupants, students and professor, and is too damp for the safe keeping of the valuable apparatus of the department. By reason of its limited floor space, it is too crowded with necessary tables and shelving to permit of the work being done with facility. For the same reason much valuable illustrative material, zoological and geological specimens must remain unused, being packed away instead of being exhibited. Dur-

ing the winter and spring terms of the last college year it was found necessary to use the northwest room of the basement to accommodate the overflow of students from the east room, but now that room has of necessity been devoted to its legitimate use as a sample room of the chemist of the Experiment Station, and it is no longer available for the use of the department. Further, the room now in use is not adapted to recitations and lectures, necessitating the use of the library of the Experiment Station for that purpose.

It will be seen readily that this procedure prevents the proper illustration of lectures and recitations because of the absence of apparatus and other conveniences. In consideration of the facts thus presented, I respectfully ask you to urge the Board of Regents to provide the department with a room, or rooms, in which specimens and apparatus may at the same time be stored and exhibited, which would serve as a room for lectures and recitations, and which would also serve as a microscopical laboratory for work in geology, zoology and history.

With the final word that the work of the department is prospering, I close this my fifth annual report.

Yours respectfully,

W. McN. MILLER,

Professor of Anatomy, Physiology and Geology.

## MINING DEPARTMENT.

To President S. A. Jones :

DEAR SIR: Herewith I submit the report of class work done under my instruction during the year ending December 31, 1892.

### WINTER TERM, 1892.

<i>Subjects Taught.</i>	<i>Students Enrolled.</i>
Metallurgy, Senior Mines -----	2
Mining, Senior Mines -----	2
Surveying, Junior Mines -----	2
Engineering, Junior Agriculture -----	2
Assaying, Junior Agriculture -----	2
Assaying, Special -----	1
Mineralogy, Sophomore Mines -----	5

### SPRING TERM, 1892.

Metallurgy, Senior Mines -----	2
Mining, Senior Mines -----	2
Metallurgy, Junior Mines -----	2
Assaying, Junior Mines -----	2
Assaying, Special -----	4
Mineralogy, Sophomore Mines -----	4

## FALL TERM.

Metallurgy, Senior Mines-----	2
Mining, Senior Mines-----	2
Assaying, Junior Mines-----	5
Mineralogy, Sophomore Mines-----	5
Metallurgy, Laboratory-----	2
Metallurgy, Special-----	1

Since my last report the department has been provided with a small stamp mill complete, which enables us to give practical instruction in this essential branch of the work.

The present location of the mill, however, in the blacksmith shop is not suitable, and leaves much to be desired in this connection. The mill should be located in the mining building, and supplied also with a small steam boiler; we could then heat the pans by steam, which is necessary to successful amalgamation. Another improvement in the mining department is the establishment of the mineralogical laboratory in the room designed for that purpose in the mining building, but which has been temporarily used as a dormitory. The mineral collection has been enlarged by some one thousand specimens, including a very fine collection of copper minerals.

Up to the present time the weakest portion of the work in the mining department has been that of the metallurgical laboratory—just where it should be strongest—and I urge upon you the necessity of improving this by having the mill properly set up in the proper place.

I can report a cheerful and earnest spirit on the part of the students under my care, and on the whole can say that I am well pleased with their work.

Respectfully submitted,

R. D. JACKSON,  
Professor Mining and Metallurgy.

## CHEMISTRY AND PHYSICS.

STATE UNIVERSITY, Dec. 1, 1892.

*President S. A. Jones :*

DEAR SIR: I have the honor to make the following report of the Department of Chemistry and Physics for the year 1892.

The following table will show the classes taught and the number of students in each :

## WINTER AND SPRING TERM.

<i>Subjects Taught.</i>	<i>Students Enrolled.</i>
Physics, L. A. and Third Year Normals.....	16
Chemistry, General.....	16
Chemistry, Qualitative Analysis.....	6
Chemistry, Quantitative Analysis.....	5
Chemistry, Quantitative Analysis, Agricultural.....	2
Chemistry, Organic (third term).....	2
Meteorology (third term).....	2

## FALL TERM.

Physics, Advanced.....	6
Physics, L. A., and Third Year Normals.....	16
Chemistry, General.....	29
Chemistry, Quantitative Analysis.....	5
Chemistry, Qualitative Analysis.....	3
Physics, Laboratory Course.....	12
Chemistry, Laboratory Course.....	29

The occupancy of the new chemical laboratory mentioned in the last report has considerably increased the effectiveness of the department. I have the pleasure of reporting the establishment of a physical laboratory during the year. Room 3 has been devoted to it, and is supplied with apparatus for making elementary experiments in all the branches of physics.

The laboratory class now consists of twelve students, who are studying and determining physical laws from experiments which they perform, setting up the apparatus for themselves. This course was created especially for the normal students to give those preparing for teaching a working knowledge of the subject. There is a laboratory course in chemistry similar to the above course in physics. Each student is assigned a desk in the laboratory containing the necessary apparatus for the experiments. In the above courses the student is required to keep a complete set of notes on experiments performed.

Respectfully submitted,

J. WARNE PHILLIPS.

## ENTOMOLOGY AND BOTANY.

STATE UNIVERSITY, }  
RENO, Nevada, Dec. 1, 1892. }

*President S. A. Jones:*

SIR: I submit herewith a report of the department of Entomol-

ogy and Botany, also a report of the work in Freehand Drawing for the past year.

During the winter and spring terms of the school year 1891-2, the second year Normal students took the course in botany prescribed for the school. The class was composed of sixteen young ladies during the winter term and eleven young ladies during the spring term. The subject was presented practically in the same manner as in former years. Owing to the difficulty experienced by some in studying objects and comparing observed facts with those stated by authors, seven members of the class failed to pass the examination held at the close of the winter term. Two young ladies who had taken the first term's work on a previous occasion, entered the class at the beginning of the spring term. The study of the local flora by each member of the class was more satisfactorily done than in any previous year. There was no class in Entomology during this year.

The collections of plants and insects have been materially increased during the year. This is by the addition of many species not heretofore taken in the vicinity, also by the receipt of specimens from other parts of the country obtained by exchange.

A number of additions to the technical library of the department has been made. Considerable study has been devoted to the flora and fauna of the vicinity of the University. This is pursued for the purpose, most immediate, of making a knowledge of the plants and insects more accessible to students in the near future. The class in Freehand Drawing placed in my charge, consisted of thirteen young ladies of the second year of the Normal school. Six periods per week, with two periods at each meeting, were devoted to this subject during the spring term. The work consisted of exercises in right lines produced in various directions, measurements of lines and distances, the construction, in order, of angles, curves, circles, ellipses, ovals and complex figures, consisting of combinations of right and curved lines. This was followed by exercises in perspective, and later by the sketching of models in wood.

During the fall term, school year of 1892-3, seven young ladies and one young gentleman from the Normal and Commercial schools devoted five periods weekly to work in the Freehand Drawing room. The work pursued is similar to that stated above.

Very respectfully,

F. H. HILLMAN,

Professor of Entomology and Botany.

# Report of the Professor of Pedagogy and Principal of the Normal School of State University.

STATE UNIVERSITY, Dec. 1, 1892.

To President S. A. Jones :

DEAR SIR: I herewith submit the fourth annual report of the Normal Department of the Nevada State University :

Number of students enrolled during the year 1892 ----- 51

## WINTER TERM, 1892.

*Subjects Taught.*

*Students Enrolled.*

Philosophy of Education, Rosenkranz, Third Year Normals	12
Methods of Instruction, Brooks, Second Year Normals ----	21
History of Education, Hailman, First Year Normals ----	12
Swinton's Grammar, First Year Normals -----	12

## SPRING TERM, 1892.

Philosophy of Education, Rosenkranz, Third Year Normals	14
Nevada School Law, Second and Third Year Normals ----	22
Methods of Instruction, Brooks, Second Year Normals ----	17
Kindergarten Culture, Hailman, First Year Normals ----	23
Criticisms upon Thesis, Third Year Normals -----	5

## FALL TERM, 1892.

Philosophy of Education, Rosenkranz, Third Year Normals	5
Methods of Instruction, Brooks, Second Year Normals ----	10
Theory and Art of Teaching, Fitch, First Year Normals--	16
Voice Culture and Elocution, Ross, Special Class. -----	16

In addition to the work of my department I have taught the first year Commercial Grammar, class of 1892, 25.

## GRADUATES.

June, 1892, elementary diplomas named in the laws of Nevada, Statutes of 1891, and later, State educational diplomas named in the same Act, were granted to the following: Estella B. Ede, Cora May Ede, Mary M. Mayberry and Clara A. Taylor. In general there has been a marked improvement in the professional interest and dignity of the department.

The First Year Normals average much better in scholarship than



those of preceding years. The Second Year Normals are entitled to commendation, based upon the fact that several who might have finished the course of study this year, have wisely chosen to remain another year and thereby secure a broader culture.

“Copious knowledge is essential to a proper mental development. It is impossible to make up by minute thoroughness in a single line for the lack of a large and extended culture.”—*Col. Francis W. Parker, Principal Cook County Normal, Illinois.*

In entire accord with the above thoughts, the truth of which has been brought constantly to my observation during twelve years of work as Superintendent of Schools of Peoria county, Illinois, I most earnestly urge that a more extended course of study be given our Normal Department. I would not eliminate our arithmetic, grammar and United States History; far from it. I would ask for double the work in arithmetic and grammar now in the present course. To make room for these, I would move some of the less practical branches into a fourth year, which should consist largely of psychology and pedagogical specials, supplemented by elective studies.

### TRAINING SCHOOL.

The training school, a feature as necessary to the efficiency of the Normal School as the laboratory to the chemist, consists of three general divisions: primary, intermediate and grammar. The general aim of the work in the first two is to fit teachers for the country and the third for the town schools. The primary and intermediate comprises twenty-two pupils ranging from six to thirteen years of age, classified according to their readers. The grammar comprises twenty-two pupils graded as seventh, eighth and ninth-year pupils.

For two years I have been obliged to superintend the instruction and discipline of seven or eight grades of pupils, reciting in three different rooms under the charge of twelve or fifteen pupil teachers daily. All this in the morning session. In the afternoon I was obliged to attend to my pedagogical classes.

It gives me great pleasure to report that these conditions have been changed, and our training school has been placed on a sound educational basis, by the appointment by the Honorable Board of Regents, September 3, 1892, of an assistant in the training school. The duties of the assistant, Miss Estella B. Ede, are largely supervisory. During the fall term she has had the supervision of the government and teaching of the pupils of the primary and part of the intermediate grades by the pupil teachers. It has been her duty to see that no fragmentary or pernicious work was done, and that each lesson was a profitable one for the pupils under instruction; also to teach in vacant periods caused by absence of pupil teachers or lack of time for practice work in the Normal course.

In addition to the supervision and teaching in the grammar and intermediate rooms, I plan the practice work of each teacher, watch to see that the various bits of work are related to each other, systematize and unify the whole, and endeavor to incite pupils and teachers to noble effort. Our work this fall has been so free from friction, so profitable to pupils and so satisfactory to teachers, that we herewith extend to you, Mr. President, and to the Hon. Board of Regents our hearty thanks for your timely aid and gracious courtesy.

### REGULATIONS FOR TRAINING SCHOOL.

Children desiring places in the training school must make application in writing to the President of the University, stating age, present attainment in scholarship and schools they have attended. These applications will be considered in their order, and applicants will be examined as vacancies occur in the school. All applications will be considered cancelled at the close of each year ending August 31. After applicants are given places in the training school they must procure the prescribed uniform, books and all required supplies before enrollment in their classes. Pupils whose work is unsatisfactory will be required to withdraw from the school.

### COMMERCIAL DEPARTMENT.

STATE UNIVERSITY,  
RENO, Nevada, Dec. 1, 1892. }

To President S. A. Jones:

DEAR SIR: I have the honor to submit my annual report of work for the year 1892. The following summary shows the nature of the work and the number of students in each class:

WINTER AND SPRING TERMS, 1892.	
<i>Subjects taught.</i>	<i>Students enrolled.</i>
Political Science .....	18
Commercial English .....	34
United States History .....	36
Bookkeeping .....	55
Typewriting .....	33
Civil Government .....	29
Shorthand .....	18
FALL TERM, 1892.	
Political Science .....	13
United States History .....	30
Bookkeeping .....	49
Typewriting .....	40
Shorthand .....	19

The course of study for the Commercial Department has been modified since my last report by substituting practical mechanics for general history in the case of the young men, and freehand drawing takes the place of history for the young women. This change seems to be a popular one, and it is hoped that it will prove a practical one. In June, 1892, Florence Abrahams, Cora Larson, Clarence C. Larson, Ardie G. Robison, Ida Sauer, Clara A. Taylor and Albert W. Ward completed the course of study prescribed for this department and received diplomas.

I would recommend that the class room be fitted up for practical instruction in bookkeeping as soon as funds available for permanent improvements are in the treasury. The work in this study has been, and in fact is now carried on under difficulties.

In closing, it gives me pleasure to say that the work of the students in the classes reported has been generally good.

Respectfully yours,

ROBERT LEWERS,

Principal Commercial Department.

## DEPARTMENT OF MATHEMATICS.

STATE UNIVERSITY,  
RENO, Nevada, Dec. 1, 1892. }

*President S. A. Jones, State University, Reno, Nevada:*

SIR: I have the honor to submit the following report for the Department of Mathematics for the present year. The instruction has been that prescribed by the Register for the different schools of the University.

The number of students under instruction in the different branches at the present time is as follows:

Descriptive Geometry, School of Mines .....	5
Algebra, School of Mines, L. A. and Agriculture and Mechanic Arts .....	18
Algebra, Normal Department .....	19
Geometry, Normal Department .....	19

The regulations of the Faculty, concerning the percentage to be gained by the students before a successful completion of the course can be attained, have been most rigidly enforced in this department. In most cases the prescribed course seems adequate to the different schools in the University. I would, however, suggest that the subject of descriptive geometry and its various concomitants be

incorporated in the list of studies required of the students in the School of Liberal Arts, the practical advantages to be derived from a knowledge of this important subject in the daily walks of life being almost without number. As an accurate knowledge of the mathematical processes is the basis of all exact science, it would appear that more time should be devoted to this subject than to any other, and as the periods for recitation are but a scant forty minutes, I would respectfully request that the periods for all mathematical studies be of one hour duration.

Very respectfully, your obedient servant,

J. M. NEALL,  
Professor.

## MILITARY SCIENCE AND TACTICS.

STATE UNIVERSITY,  
RENO, Nevada, Dec. 1, 1892. }

*President S. A. Jones, State University, Reno, Nevada :*

SIR: I have the honor to make the following report of the department of Military Science and Tactics of this University for the current year. The change in the U. S. Army drill regulations which took place about the beginning of the present year, necessitated a change in the military department of this institution. The original tactics (Upton) provided for a single rank formation, while the new drill regulations require all formations under arms to be in double rank.

The limited number of cadets would no longer permit a battalion of two companies, owing to the decreased front, and a reorganization was effected providing for a single company. Commendable progress has been made towards a thorough knowledge of the new tactics, and the organization at the present time is in a good state of instruction and discipline. There have been but few cases of violations of the regulations for the government of the military establishment, and none of these has been of a grave character. The number of students for military instruction has varied from 46 to 71, the latter being the present strength. As there were here but fifty stands of arms and fifty sets of accoutrements, a requisition was made on the Ordnance Department, U. S. Army, for an additional supply of arms demanded by the increased number of cadets, and the arms have been received. An arrangement has been made with a local merchant for furnishing the prescribed uniform. These uniforms are of better quality and the clothes are of better fit than those received from the East, and although the cost is \$20, I think

the uniform purchased here will prove more economical than the imported one.

A detachment for instruction in military signaling and telegraphy has been formed, consisting of five cadets, and it has already made considerable proficiency in the use of the flag. I request that I be authorized to purchase two heliographs for sun signaling in order that the necessary perfection in this branch be attained. I would urgently but respectfully request that steps be taken towards the erection of a suitable hall for drill in inclement weather. In this latitude for several months in the year the weather is such as to forbid drill except under cover and much valuable time is lost.

Such a building could be utilized for other purposes, notably a gymnasium, a necessary adjunct for institutions of this kind. Be so kind as to present this matter in a forcible manner to the proper authorities, in order that an appropriation may be made for this object.

Very respectfully, your obedient servant,

J. M. NEALL,

First Lieutenant 4th U. S. Cavalry, Professor of Military Science and Tactics.

## DEPARTMENT OF ENGLISH AND HISTORY.

STATE UNIVERSITY, Dec. 1, 1892.

*To the President of the University:*

SIR: I have the honor to submit the report of the Department of English and History for the year ending December 31, 1892.

The enrollment in the various classes was as follows:

STUDIES.	Winter Term.	Spring Term.	Fall Term.
Rhetoric. Freshmen of all schools	38	36	56
English, Essays. Sophomore, Junior and Senior	22	19	41
English, Old English. Sophomore, L. A., Normal			25
English, The Drama. Junior and Senior			9
United States Constitutional History. Junior and Senior			8

During the first two terms I taught the following classes in Latin :

Freshmen, Latin Lessons -----	13	10
Sophomores, Cæsar and Cicero -----	7	7
Juniors, Virgil -----	6	5

Though the work done in all these classes was fairly satisfactory, it is gratifying to note a marked improvement in the work of the fall term. Greater and more uniform interest was manifested, and the recitations showed more thorough preparation.

Encouraging as this improvement has been, however, it is believed that still better results in the study of literature and history might be attained by giving students greater liberty in the choice of studies; that is by the elective system.

The employment of an instructor in Latin gave the professor of English much relief, and enabled him since the beginning of the fall term, to devote the whole of his time to English and history. As the result more work is done in these subjects. New classes have been formed in history and literature, and more extended work is done in composition, which is now taken by all students in the University courses. These added classes, together with the increasing number of students, threaten, in the near future, to make the work of this department very heavy.

At present the most pressing need of the department is books for the library. A well-filled library, the linguist's laboratory, is as essential to the student of history and literature as is a well-furnished laboratory to the student of chemistry or biology.

Our library is very meager. Even in the field of general literature, many standard works are lacking; while in the lines of American history and English philology, our library is wholly insufficient for our work. One thousand dollars would not be too much to supply books absolutely needed in this department.

Respectfully,

T. W. COWGILL,

Professor of English and History.

## DEPARTMENT OF PRACTICAL MECHANICS.

*To S. A. Jones, Ph. D., President :*

SIR : At your request, I herewith submit my report for the work done in the department of Practical Mechanics for the year ending this December. Since the last annual report this department has increased wonderfully, both as regards facilities and numbers. The following is a list now under instruction. In the carpenter shop there are twenty-four students from the different schools, as follows :



Agriculture and Mechanic Arts 4, School of Mines 6, Commercial 8 and Special 6.

In the machine shop there are ten students, distributed among the schools as follows: Agriculture and Mechanic Arts 2, Mines 5, Special 1. There is also one special in the blacksmith shop.

There has been erected for this department one two-story building twenty-four feet by sixty, the lower floor of which is used as a carpenter shop. In it we have twenty-four benches, all of which are in use. A great portion of this building was put up by the students by way of instruction. It has been a great benefit, and we now wonder how the department got along without it. The enlargement of the above created a necessity for more carpenter tools, so there were added twelve sets, making twenty-four sets in all.

The old shop is now used entirely for machines and iron work, the equipment of which we are continually increasing in the way of machines and machine tools. Among those introduced lately are one iron planer, eight iron vises, one machine lathe and one power jig-saw. The work in this department has been aided very materially by the purchase of a fifteen-horse power steam engine. It is a second-hand machine, but has been put in complete repair by the students in the Sophomore year, and is run by them week about, giving them practical instruction and experience in the running and care of steam engines. The work done in both shops this year, as a rule, has been of value to the University, being equipment for the different departments. So the material used has been for a purpose and not merely for instruction, as is generally the case. Of course it cannot always be that way, there being too much sameness in the work required. We therefore have to fall back on our exercises, so that the student will get proper instruction. Among the articles of value made this term, I would like to call your attention to, are the soil boxes made for the soil exhibit at the World's Fair. The work speaks for itself. In the machine shop the students are constructing a small steam engine, half horse power, Corliss type, from the rough castings, also an eight light electric dynamo. It gives them a knowledge of the inside workings of both machines, as well as the use of tools. All the work of setting new machines and putting up shafting is done by the students, some very good points being obtained by them in such work.

As for the students I can only speak in the highest terms, all taking great interest in whatever they are required to do. The register provides for seven terms' work in the School of Agriculture and Mechanic Arts, six terms in the School of Mines and three terms in the Commercial course, which is, I think, as much as can be expected of them with the other studies.

The thanks of the department are due to the Hon. Theodore Winters for the donation of a machine lathe and a power jig-saw.

Also, to yourself, the Honorable Board of Regents and members of the Faculty for the interest taken in the department.

Yours respectfully,

RICHARD BROWN,  
Superintendent.

## MECHANICS AND MECHANICAL DRAWING.

RENO, Nev., Dec. 1, 1892.

To President S. A. Jones :

SIR: I hereby submit my report of the classes in Mechanics, Mechanical Drawing and Mathematics that were under my instruction during the year ending December 31, 1892.

### WINTER TERM, 1892.

#### *Studies taught.*

#### *Students enrolled.*

Analytic Mechanics, Senior Mines -----	1
Mechanical Drawing, Senior and Fresh. Mines, Agriculture	9
Algebra, Sophomore, Liberal Arts-----	5
Algebra, Second Normal -----	14
Arithmetic, First Commercial-----	26

### SPRING TERM, 1892.

Hydro Mechanics, Senior Mines -----	1
Mechanical Drawing, Senior and Freshman Mines-----	7
Algebra, Second Normal -----	13
Algebra, First Commercial -----	17
Arithmetic, First Normal -----	22

### FALL TERM, 1892.

Analytic Mechanics, Senior Mines-----	2
Mechanical Drawing, Junior and Senior Mines-----	7
Algebra, Freshman Mines, L. A., Ag. and M. A. -----	29
Arithmetic, First Commercial-----	24
Surveying, Junior Mines-----	4

The work in Analytic Mechanics throughout the college year of 1891-2 was worthy of exceptional praise. The classes in mechanical drawing took a good deal of interest, but the freshmen were unable to do very intelligent work owing to the fact that they had not then pursued the study of descriptive geometry. This defect in the course has been remedied, and mechanical drawing is taught during the Senior and Junior years in the School of Mines and the School of Agriculture and Mechanic Arts. The classes in algebra did very acceptable work. The text books used were Wentworth's College Algebra for the college students, and Well's Algebra for the

Normals. Well's Algebra was also used for the short course in algebra given to the Commercial students.

The class of Commercial students in arithmetic did satisfactory work and but a small number failed to pass the final examination.

It is at this date impossible to report completely upon the work of this term. At the request of Professor Jackson, the surveying was transferred to me at the beginning of this term. The equipment, though meager, is in fair condition and some small additions have been purchased since it was transferred to my care. The department is in need of a wye level, a plane table with alidade and a sextant. I shall request an appropriation for their purchase at the beginning of the coming year. I shall also ask for an appropriation for my class room at the same time. At present it is very poorly provided with seats and writing facilities.

A number of books have been purchased for the library of great value to the department and to the students at large.

Respectfully yours,

HENRY THURTELL.

Professor of Mechanics and Mechanical Drawing.

## LATIN LANGUAGE AND LITERATURE.

RENO, December 1, 1892.

*To President S. A. Jones, Ph. D., Nevada State University:*

DEAR SIR: Owing to my short connection with the University, since the 7th of September, my report must necessarily be brief. At present there are four classes in Latin, with enrollment as follows:

Horace, Latin Literature.....	5
Cicero.....	3
Cæsar.....	10
Latin Lessons.....	19
Total enrollment.....	37

There has been an increase of four over the enrollment of the corresponding term of last year, which, though not large, shows a steady growth in the department. The course of study, also, has been broadened, owing to increased facilities, such as reference books, maps, etc., and the election of an instructor in Latin in charge of the department.

The work in Jones' Latin Lessons has been supplemented by exercises in colloquial Latin, taken from D'Ooge's Colloquia Latina.

These have not only enlivened the recitation, but have also been useful in the translation of the written sentences.

In the classes in Cæsar and Cicero, frequent exercises in Latin writing have been given. These have all been based on the text, that the student might imitate the style of the author as well as gain facility in translation. In Latin literature, Cruttwell's History of Roman Literature is used as a reference book, while a first-hand acquaintance with the authors is gained by the use of Smith's Latin selections. Each member of the Sophomore, Junior and Senior classes has voluntarily undertaken to write and read before the class a paper on some topic connected with the authors studied during the term. The papers that have thus far been read have proved the success of the plan.

In addition to the work in Latin, I have had charge of the following classes:

Beginning German ..... 22

General History (A. and M. A.) ..... 4

The work in German and Latin has been very satisfactory. In regard, however, to the class in general history, I would suggest that hereafter the students in the Department of Agriculture and Mechanic Arts be permitted to enter the regular classes in history in the Department of Liberal Arts, and that the period now devoted to their recitation be given up to a course in scientific Latin, which has been requested by Professor Miller for those students who are taking his course with a view to studying medicine.

Respectfully submitted,

J. E. CHURCH, JR.,  
Instructor in Latin.

## Report of Delegate to the Association of American Agricultural Colleges and Experiment Stations.

[Held at New Orleans, La., November 15 to 20, 1892.]

*To the President of the Nevada State University and Director of the  
Experiment Station :*

SIR: I have the honor of submitting herewith my report as delegate to the above-named convention, said report being in the form of an outline of the proceedings of the convention.

The convention convened in general session at noon on November 15, 1892. Opening prayer by the Rev. Dr. Palmer. Addresses of welcome on the part of the State by Governor Foster, on the part of the city by Mayor Fitzpatrick, and on part of Tulane University, in whose halls the convention was held, by President William Pres-

ton Johnson. Responses on the part of the convention by President W. LeRoy Broun of Alabama, President G. W. Atherton of Pennsylvania and Judge Henry Chamberlain of Michigan. Freedom of the floors of the sugar, cotton, and rice exchanges and the Board of Trade were extended, and an invitation to visit the Southern University and Agricultural College (colored) was given.

#### AFTERNOON SESSION.

Report of Section on College Work by President E. M. Turner of West Virginia College, in which he said: "All States, save Kansas, Kentucky, Michigan, Massachusetts and New Hampshire, report an increased number of students over last year. The stimulating effect of increased revenue resulting from the new Morrill Act was noticed, but attention was called to the fact that comparatively few of the graduates returned to the farm, thus defeating one of the prime objects of these colleges. Reports from the various colleges show the following improvements: Delaware, wood-working shop and recitation hall, costing \$9,000; Arizona, \$8,000 in improved apparatus; Illinois, science building, cost \$70,000 and \$5,000 in apparatus, and a contemplated engineering hall, to cost \$100,000; Indiana, engineering laboratory, costing \$50,000; Iowa, new cheese-making house, offices, engineering house and swine house; Kansas, new iron shop and improvements, costing \$4,000; Kentucky, mechanical engineering building, costing \$32,000 and apparatus to the amount of \$5,000; Maine, engineering hall, costing \$30,000; Michigan, laboratory and greenhouse \$14,000, books \$6,000, machine shop \$18,000; Missouri, \$50,000 on buildings; Nebraska, \$100,000, library building in course of construction; New Hampshire, location changed from Hanover to Durham to secure a gift of \$1,000,000; Cornell (New York), large addition to apparatus; North Dakota, \$45,000 in new buildings; Tennessee, \$60,000, science building; Nevada, new mechanical shops and mining building; Utah, new building \$80,000, apparatus \$20,000; West Virginia, science hall \$40,000, gymnasium \$20,000, engineering department \$18,000, books and apparatus, expended and to be expended, \$38,000; South Carolina, \$150,000 expended, and college not yet open."

Section on Agriculture reported through Professor Ingersoll of Nebraska, a very encouraging progress from thirty colleges, the others not responding to his request for information. Section on Botany reported, though Professor G. F. Atkinson of Cornell, new departments established in New Mexico, Texas and North Dakota during the past year, and interest in the department greatly increased over the country. A great deal of work has been done on fungoid diseases of staple crops. Section on Chemistry reported, through Prof. M. A. Scoville, of Kentucky, in detail the advance

in that branch during the year, especially that in the perfection of methods for dairy and soil work. Section on Entomology reported, through Prof. Lawrence Bruner, of Nebraska, progress in that line. The report contained 25,000 words and was not read. It will be printed in full. Section on College Work: Discussion opened by General S. D. Lee, President of the Mississippi College, who made a statement that the "Agricultural College of to-day is a failure," for the reason that so few of the graduates return to the farm, as was meant they should by the Act of 1862. Prof. Sanborn of Utah gave it as his opinion that the reason so few young men, raised on the farms, were enrolled in the Agricultural course, is that they think they know all of farming that is necessary. He thought this to be a mistake. President Fernald of Maine said he believed the trouble lies in the fact that while parents, farmers especially, recognize the importance of educating their sons in other lines, they will not send them to college to learn farming, and that the idea prevails that more money can be made after graduation in some other course. Others followed, and brought out the idea that with the development of the mechanical and engineering courses the agricultural course must suffer, not being as attractive and less promising for future gain. This, however, cannot be helped, for mechanical courses are as much a part of the provisions of the organic Act of 1862, as is the course of agriculture. The student is free to choose his course and the college must abide thereby and do its best to give him the education that he desires. It is a mistaken idea to think that agriculture must be the only course to be pushed and nurtured in our land grant colleges.

#### EVENING SESSION.

Most of this session was given up to President Broun's address, in which he spoke at length of the broadening effect of the agricultural colleges upon the national system of education; of the increase of revenue and the enlargement of educational facilities by the provisions of the Morrill bill of 1890, and of the great good of the military departments of the colleges. After this followed a discussion upon "The Relation of Technical and General Courses of Study," opened by President Fairchild, of Kansas, who showed the necessity of combining the two.

#### MORNING SESSION, NOVEMBER 16.

The first business transacted was revision of the Association constitution. The question of establishing a section on Mechanic Arts brought up considerable discussion, for the reason that a Mechanical association formed on the lines of this association had been organized, thus showing a disposition on the part of the Mechanical departments to branch off from other departments of the colleges,

whereas, they are as much a part of this association as any other department of the land grant colleges, and there is no reason why a separate association should be supported. It was suggested that the name of the association is too narrow in its scope. That it would be better to call it the Association of American Colleges of Agriculture and Mechanic Arts and Experiment Stations, but on further discussion it was voted not to change the name but to provide for a section on Mechanic Arts and later for a section on engineering.

Papers on "What shall the Professor of Agriculture Teach?" were read by Professor Morrow of Illinois and Professor Harwood of Michigan. The following points were specially mentioned by Professor Morrow: "Teach first, agriculture pure and simple; second, farm resources—be very elementary in science of crops and animals; farm management—pay special attention to business methods—political economy; history of agriculture—cultivate the power of observation by requiring students to obtain knowledge of current agricultural events—use the mental tool; our libraries are far too much of a museum; insist upon the students making reports from current journals. Finally, cultivate manliness in its broadest sense. By Professor Harwood: First, teach agriculture—agriculture as it is, not as it is painted. Where this is not done no college succeeds in its work.

Student labor. One of the most practical forms of teaching, but in no case put the student on a level with the common laborer. Give him experiments to perform. Put him in charge of work and require detailed reports in all cases, and show him that you have confidence in his work.

The afternoon was spent in visiting the Louisiana State Sugar Experiment Station and the Southern University.

#### EVENING SESSION, NOVEMBER 16.

After passing a resolution that a committee of nine from members of the governing boards of colleges and stations be appointed as an advisory board to act with the standing committee on co-operative exhibit for the World's Fair, and a committee of four to supervise the test of dairy cows at the fair, discussion was opened on the publications of the stations. A. W. Harris, Director of the Office of Experiment Stations, was the first speaker. He said that the great trouble with the bulletins as published is the title page. There is no uniformity of numbering. One station will use numbers in consecutive order, another will number consecutively for a few issues, and then comes No. 17½, for instance. Other stations use the letters of the alphabet to designate the different issues. The question is, where is this to stop? Will we have AA, AB, BB, etc.? Another fault is the fact that they are not properly indexed and do not admit of ready reference. Mr. Harris advocated a uniform

title page for all station publications. In this connection, it may be said that two stations—New Jersey and Nevada—have a sensible title page, giving topic of bulletin at top of page, so that in running over a file one has only to turn back the top to get at the title. Professor W. A. Henry of Wisconsin followed, and spoke at length on the same lines as Mr. Harris.

A resolution was now passed authorizing the appointment of a committee to devise a uniform system of Station bulletins. The committee consists of Director Johnson of Connecticut, Director Johnson of Wyoming, Director Henry of Wisconsin, and Director Redding of Georgia.

The advisory committee for the World's Fair consists of Henry Chamberlain of Michigan, W. R. Cavitt of Texas, ex-Governor J. A. Beaver of Pennsylvania, H. B. Dale of Wisconsin, H. Gibson of Kentucky, R. W. Warder of Ohio, Daniel Needham of Massachusetts, W. L. Rhynerson of New Mexico, and John Cameron of Mississippi. The committee to supervise the test of dairy cows at the Fair consists of W. A. Henry of Wisconsin, H. P. Armsby of Pennsylvania, M. A. Scoville of Kentucky, and Dr. S. M. Babcock (of milk tester fame) of Wisconsin. The section on botany now presented papers before the general session on "Notes on Treatment of Apple Scab," by Professor E. S. Goff of Wisconsin; "Comparative Tests of Fungicides in Checking Potato Rot and Blight," by L. R. Jones of Vermont; "Rot in Fruits," by B. D. Halstead of New Jersey.

#### MORNING SESSION, NOVEMBER 17.

After passing motions to appoint a committee on resolutions of thanks to the people of New Orleans for their hospitality, and the reading of reports of standing committees, the special committee on the World's Fair Exhibit reported through H. P. Armsby of Pennsylvania, Chairman. This was lengthy and dwelt upon the progress of work done thus far and need of increased financial aid. He said: "The Exposition is a national affair, and as the Federal Government had expended \$800,000 for the colleges and stations, it is as little as they can do to see that their exhibit is a success. The exhibit is to be a collective affair, and no college or station is to have a separate exhibit. The space allotted for this purpose is in the southwest corner of the Agricultural building, and covers 8,600 square feet exclusive of aisles. It is divided into three parts. One side is to contain exhibits representing different departments of Station work; the other similarly arranged for the college exhibit, while the space between these two exhibits is to be common ground. It is to be filled with photographs of the college grounds, exteriors and interiors of buildings, photographs of faculties and station workers. The idea is to have each institution offer what it has to send, and the committee is to pick out what it thinks will



best serve the purpose, so every institution will not be represented in all things. The Secretary of Agriculture is doing all in his power to aid the Association in this exhibit, and all articles selected by the committee will be transported to Chicago, cared for while there and returned free of cost to the institution sending them. It was resolved that each college and station send one competent attendant to Chicago to remain one month to explain the exhibit, etc., the Committee of Arrangements to call for such attendants as necessary. It was decided to arrange for an agricultural congress, in connection with the World's Fair auxiliary, in the latter part of October, 1893, the following departments to receive especial attention: First, general farm culture; second, animal industry; third, horticulture; fourth, organization and legislation; fifth, education and experimentation.

The afternoon was given up to a trip on the Mississippi to Chal-amet and the Federal cemetery at that place, and to an inspection of a large grain elevator at South Port.

#### EVENING SESSION, NOVEMBER 17.

Report of the Weather Bureau read by A. W. Harris of the Office of Experiment Stations was the first thing taken up. The committee had conferred with the bureau and reported that observations along the cotton belt have been extended and further extensions of the work might be looked for. The election of officers was next taken up and resulted in the following persons being chosen: President, Prof. W. A. Henry of Wisconsin; Vice Presidents, Prof. W. C. Stubbs of Louisiana; Prof. E. W. Hilgard of California; Prof. John A. Meyers of West Virginia; Pres. A. Q. Halliday of North Carolina and Prof. J. F. Hickman of Ohio; Secretary and Treasurer, Prof. M. A. Scoville of Kentucky; Bibliographer, Prof. S. W. Johnson of Connecticut; Executive Committee, Chairman, Major H. E. Alvord of Washington, D. C.; Hon. James Neilson of New Jersey; Pres. H. H. Goodell of Massachusetts, and Pres. C. W. Dabney, Jr., of Tennessee.

The several sections then elected their officers.

Discussion was now opened on the relation of colleges to the Department of the Interior. Hon. John H. Holcombe, Chief Clerk of the Bureau of Education was the first speaker. He dwelt at length upon the fact that some misunderstanding existed in regard to the reports sent to the Department of the Interior, upon the expenditures of the money derived from the Morrill Act of 1890. The report of the Treasurer is required by law to be in on or before the first day of September of each year. A detailed report of all moneys spent is required, but this does not seem to be generally understood by the heads of the colleges. The persons in authority at the colleges seem to have a very indistinct idea as to the purpose for which the money

should be expended. For example, Florida has built a \$3,500 house for the Director, from the Station fund; Oregon purchased a piano from the Morrill fund (hence the special decision in regard to musical instruments); New Mexico paid their music teacher from the same fund. This brought up a great discussion concerning the form of report blanks, some favoring an itemized account and some opposing it. It was finally ordered that the Executive Committee confer with the Department of the Interior and the Bureau of Education to draw up a form for reporting the expenditures of the Morrill and Hatch funds. After the passage of resolutions requesting Congress to provide for the administration of the large amount of extra work which is thrown upon the Interior Department and Bureau of Education by the Hatch and Morrill Acts, the convention adjourned to meet Friday evening at the St. Charles Hotel to transact final business.

Friday was very profitably spent in visiting sugar plantations and in inspecting the Louisiana State University and Station buildings and grounds at Baton Rouge. At 8 o'clock P. M. the convention met and passed resolutions thanking those who had made the stay in New Orleans so pleasant, and adjourned to meet next year, probably at or near Chicago.

Respectfully submitted,

N. E. WILSON, Delegate.



UNIVERSITY OF MICHIGAN



3 9015 06839 9800





